

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) An access point providing a wireless local area network connection to a terminal device, for the purpose of connecting the terminal device to a wide area network, the access point comprising:

an antenna unit that sends and/or receives a radio frequency signal used for exchanging information via the wireless local area network, **wherein the antenna unit comprises a sending antenna that sends the radio frequency signal, and a plurality of receiving antennas that is installed around the sending antenna and receives the radio frequency signal;**

a signal conversion unit that performs conversion between the radio frequency signal and a digital signal as the information;

an information processing unit that executes processing of the digital signal based on a communication protocol for exchanging of the information;

an antenna case that contains the antenna unit and the signal conversion unit;

a main unit case that, separated from the antenna case, contains the information processing unit **and a receiving synthesis unit;** and

a wired cable that, connecting the antenna case and the main unit case, performs transmission the digital signal between the signal conversion unit and the information processing unit,

wherein the receiving synthesis unit is connected to each one of the plurality of receiving antennas by the wired cable and performs diversity receiving with respect to the received radio frequency signals from the plurality of receiving antennas.

2. (Original) An access point according to claim 1, wherein the signal conversion unit comprises:

a frequency conversion unit that performs conversion between the radio frequency signal and an intermediate frequency signal having lower frequency than the radio frequency signal;

a modem unit that performs modulation and/or demodulation between the intermediate frequency signal and a base band signal; and

a base band unit that performs conversion between the base band signal and the digital signal.

3. (Previously Presented) An access point according to claim 1, wherein the transmission of the digital signal by the wired cable is either one of serial transmission and parallel transmission.

4. (Previously Presented) An access point according to claim 1, wherein the wired cable, in addition to transmission of the digital signal, performs at least one of transmission of a control signal and power supply, for at least one of the antenna unit and the signal conversion unit.

5. (Previously Presented) An access point according to claim 1, wherein the wired cable is coaxial cable.

6. (Currently Amended) A method for exchanging signals at an access point providing a wireless local area network connection to a terminal device, for the purpose of connecting the terminal device to a wide area network, the method comprising:

disposing an information processing unit in a main unit case, wherein the information processing unit executes processing of a digital signal based on a communication protocol used by the wireless local area network;

disposing a signal conversion unit in an antenna case separated from the main unit case, wherein the signal conversion unit performs conversion between the digital signal and a radio frequency signal which an antenna unit sends and/or receives over the wireless local area network, **wherein the antenna unit comprises a sending antenna that sends the radio frequency signal and a plurality of receiving antennas that is installed around the sending antenna and receives the radio frequency signal;**

connecting the main unit case and the antenna case via a wired cable, **wherein a receiving synthesis unit contained in the main unit case is connected to each one of the plurality of receiving antennas by the wired cable;** and

transmitting the digital signal according to the protocol of the local area network via the wired cable, **wherein the receiving synthesis unit performs diversity receiving with respect to the received radio frequency signals from the plurality of receiving antennas.**